Montana Department of Environmental Quality

2004 Remediation Division Annual Report

John Koerth honored with Governor's Award for Excellence

"Toxins Haunt Giant Springs" read the October 31, 2002, headline in the Great Falls Tribune. On December 12, 2003, the Tribune proclaimed "Cleanup Completed." During the thirteen-month interim, Abandoned Mines Section Supervisor John Koerth spearheaded a reclamation project that included site sampling, risk assessment, environmental compliance documents, meetings with community groups, public meetings, contract preparation and bidding, and construction contracting and oversight. Completing construction in the limited window of time available involved replacing Hatchery employee residential yards built on smelter wastes, removing contaminated sediments from the reservoir behind Rainbow Dam; and excavating100,000 tons of soil contaminated with lead and arsenic from Giant Springs Park.

The complicated cleanup was completed under the watchful eye of a concerned and involved citizenry. Despite the potential for controversy and weather delays, John Koerth kept the project on a tight and aggressive schedule. Completion of the project removed the stigma of contamination from a popular state attraction in plenty of time for the Lewis and Clark Celebrations planned for the Park.

Remediation Division Indicators

Indicator	Actual 2002	Actual 2003	Actual 2004	Estimated 2005	Estimated 2006	Estimated 2007
Active Sites	1,220	1,284	1,294	1,328	1,346	1,348
Inactive Sites	546	4,862	4,929	4,897	4,883	4,883
Site Activities	281	350	280	369	361	353
Sites Closed/Delisted	64	91	75	82	82	82
Cost Recovery Invoices	61	71	75	69	69	69
Costs Recovered	$429,933	$470,199	$787,325	$580,000	$580,000	$580,000
Contracts (#)	122	116	149	129	129	129
Contract Costs	$4,788,074	$5,529,896	$4,964,575	$5,094,182	$5,094,182	$5,094,182
Public Meetings	23	25	27	42	44	43
Public Comment Periods	2	5	10	22	19	21

Hazardous Waste Site Cleanup Bureau

Site Response Section

In addition to the routine reviews and approvals the section conducts, there are a number of highlights that others may find of interest.

- Received $582,722 in new Brownfields grant funding and secured $151,000 of Brownfields money to assist cleanup of Brewery Flats in Lewistown in 2005. Brownfields coordinator attended five public outreach meetings and presented Brownfields opportunities to communities in Montana. "Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment," according to the federal definition. Initiated four targeted Brownfields assessments: Brewery Flats, Lewistown; Old Holy Rosary Hospital, Miles City; David Post Yard, Willow Creek; and Berg Lumber Mill, Lewistown.
- Negotiated an interim settlement with Arco/Asarco for the Upper Blackfoot Mining Complex that includes recovery of past costs and completion of a data summary report in 2005; and also began removal of waste rock piles at the upper Mike Horse mine site.
- Oversaw a large-scale cleanup/development plan at Montana White Pine Sash Company facility in Missoula that was eventually withdrawn by Sparrow Group Developers as a result of lack of funding. Started reviewing the Feasibility Study Report in order to determine the final cleanup of the facility. Continue to monitor the well system and operate the SVE and TFR systems at the facility.
- Finalized the Comprehensive Remedial Investigation Report at the S&W Sawmill facility in Darby and held a public meeting regarding the document. Oversaw a white rot fungus biological treatment study at the facility that will continue next year and has shown promising early results. The study focuses on the ability of naturally occurring fungi to degrade pentachlorophenol contaminants in soil.
- Approximately 90,456 gallons of asphalt was recovered and recycled through an interim action at Big West Oil, Kevin, with more scheduled for next year.
- The Cominco Anderson Mine Timber Treatment Area, Garrison Junction voluntary cleanup was completed in 2004.
- DNRC issued a Controlled Groundwater Area order in February 2004 with an amendment issued in April 2004 as an institutional control to protect human health at Bitterroot Valley Sanitary Landfill, Victor.
- Initiated a cost recovery action for Kalispell Pole and Timber, Reliance Refinery Company, and Yale Oil Corporation. The action seeks payment of approximately $225,000 in outstanding costs and additional investigation and cleanup of the three facilities.
- Implemented restrictive covenants at a portion of the Montana Air National Guard facility. The purpose of the restrictive covenants is to limit the future use of the facility only to industrial or commercial use.
- The Water Quality Act (WQA) program opened 6 new sites, closed 9 sites. The program has worked successfully with the Enforcement Division to bring an enforcement action against a recalcitrant responsible party, prompting them to submit a work plan. WQA has

reviewed and approved a work plan for a pilot injection of hydrogen peroxide at this site. The goal of the hydrogen peroxide injection is to oxidize/break down solvents in the soil and groundwater. The contaminants reside partially under a building in tight materials that make peroxide injection a more promising cleanup technology than excavation or soil vapor extraction.

Petroleum Release Section

- Received $696,876 in LUST Trust grant.
- Recovered $40,374 in LUST Trust funds through cost recovery actions.
- Received $40,021 in a grant from the American Petroleum Institute.
- Confirmed 56 new petroleum releases and closed 47.
- Approved 305 work plans for petroleum releases (123 remedial investigations, 79 cleanups, 163 monitoring).
- Developed draft standardized corrective action plan and report formats for typical scopes of work performed at petroleum release sites in order to streamline review and approving processes; these have been circulated to the environmental consulting community for comment.
- Updated PRS Technical Gudance Documents 10, 11, and 14.
- Provided articles to MUST News on new developments in petroleum remediation.
- Worked with the Petroleum Tank Release Compensation Board to prepare standardized remediation task names to improve tracking of Board expenditures for petroleum releases.
- Prepared FFY2005 Brownfields Grant request for program start-up funding and support for up to five Targeted Brownfields Assessments.
- Mitigated a threat to the Blackfoot River near Missoula by excavating approximately 1,500 cubic yards of hydraulic oil contaminated soil associated with the log processing track at the Stimson Lumber Company facility in Bonner. The hydraulic oil had previously seeped into the facility's fire suppression pond that is hydrologically connected with the Blackfoot River.
- Approved innovated cleanup technologies including ISOC technology, chemical oxidation technology, and dual-phase extraction and bio-stimulation technology.
- Staff members presented professional papers and talks at national professional meetings on innovative investigative and cleanup technologies being used in Montana: Mike Trombetta, bureau chief, presented a paper “Vapor Intrusion in a Small Town in Northern Montana” at the 16th Annual Conference for State UST/LUST Managers, in New Orleans; Jeff Kuhn, section manager, and Pat Skibicki, project officer, presented a paper “Electrical Resistance Heating Technology Coupled with Air Sparging and Soil Vapor Extraction for Remediation of MTBE and BTEX in Soils and Groundwater in Ronan, Montana” at the 20th Annual International Conference of Soils, Sediments and Water in Amherst, Massachusetts, and at the UST/LUST Conference in New Orleans.
- Modified Administrative Rules to address reporting requirements for suspected and confirmed releases, outline requirements to resolve petroleum releases, and address long-term monitoring sites.

Fiscal and Administrative Services

FAS completed a challenging year processing tons of work orders for follow-up activities to improve the functionality of the LCG building. In addition, staff successfully adjusted to work-load modifications resulting from reorganizations in the fall of 2004 and from some prolonged vacancies. Further, FAS made inroads with daunting task of records management, purging duplicative and non-agency records from storage. Approximately 750 boxes remain stored offsite that are included in this management process.

Cost Recovery

EQPF: $658,328.35 collected in FY 2004
LUST: $40,374.76 collected in FY2004

Records Management

A records management team was developed to start creating a remediation records management plan. The team has analyzed the way that remediation division is currently storing records and is in the process of making improvements to the current system in conjunction with the Department's overall records management plan.

Work concluded with Information Technology Services to develop an Access database to electronically track the content of boxes sent to archives. The database is currently being updated which will eventually allow staff to see contents of each box on their desktop instead of relying on paper indexes that have been incomplete.

Public Information

Work accelerated with project managers throughout the division on drafting, editing, publishing, distributing and placing fact sheets, news releases, legal ads and display ads as well as arranging for public meetings related to investigation and cleanup of numerous sites and special projects. Information repositories in communities with CECRA and CERCLA sites were established and/or maintained in Billings, Livingston, Lewistown, Missoula, Victor, Cut Bank, Sunburst, and Hamilton. The public information officer also continued coordinating drafting, editing, publishing and distributing four issues of MUST News, the department's quarterly publication that provides news to UST owners and operators.

Settling in at the Last Chance Gulch Building

In December 2003, Remediation Division moved from Phoenix Avenue to 1100 N. Last Chance Gulch. The first step was to pack almost 3,000 boxes of files. At one time or another, all staff helped pack or unpack these. In the end, 350 boxes were sent to archives; some went to the Metcalf with the Underground Storage Tank program and the rest moved to the Gulch. By the end of February, all files were available for staff, the public and others to use.

Some of the main building problems have been corrected. We changed all lighting to full spectrum bulbs, got numerous roof leaks repaired, and straightened out snow removal and ground maintenance. The Armory was built in 1942, and has since been converted into office space. Only part of this building has been retrofitted with air conditioning and the boiler is cantankerous. Heat, too much or too little, has continued to be a problem throughout the year.

DEQ worked with the Department of Administration on a long-term building-improvement plan that has been submitted to the Legislature in HB5.

Information Technology Support Services

Remediation Division IT Support, consisting of two Office of Information Technology personnel located at the LCG building. These two personnel had a busy year. Their major 2004 accomplishments include:

- Upgrade of all Remediation Division databases from Access 2000 to Access 2003;
- Migration of three separate security file databases into one master security file;
- Export of all Remediation Division core data fields to the NRIS Digital Atlas online web mapping service;
- Development of update procedures to allow automated data export to NRIS for weekly data updates;
- Development of site reports for display of Remediation database information in a web browser environment;
- Continued with large data cleanup and normalization effort to eliminate data duplicity between different database systems;
- Upgraded tracking and reporting functionality of Petro Fund database.
- Continued support of MT-Pi enhancement design and development effort.

Mine Waste Cleanup Bureau

Abandoned Mined Land Section

Montana's Abandoned Mined Land Reclamation (AML) Program within the Department of Environmental Quality (DEQ) is responsible for cleanup and reclamation of historic (pre-1977) mining-related disturbances. In effect since 1980, Montana's AML Program is regulated by federal and state statutes statute, and by Montana's Approved Abandoned Mine Reclamation State Plan published at 30 CFR Part 926.

The money for abandoned mine reclamation is made available through congressional appropriation. Each year Montana receives approximately $3.5 million in federal grants to fund cleanup and closure at mine sites where there is no continuing reclamation responsibility under federal or state laws. Since 1982 the AML Program has spent $95 million reclaiming abandoned mines in Montana with approximately 90 percent going to private-sector engineering, consulting and construction firms. While areas disturbed by coal mining have the highest priority under Montana's program, abandoned mine funds are used to reclaim hard-rock and open-cut mining disturbances as well.

Fee collection which supports abandoned mine reclamation activities expired September 30, 2004. Attempts to extend fee collection failed to pass in the previous Congress and the AML Program is being kept alive by continuing resolutions. Multiple competing bills have been proposed—some with provisions that are very bad for the Montana program. The future of Montana's AML Program depends on the ability to get a bill through Congress that will continue fee collections and provide for annual grants for Montana into the future. Thus, AML has continued to follow reauthorization legislation closely.

Program highlights in 2004 include:

- Received the following grants from USDOI - Office of Surface Mining:
  - $511.910 Administrative Grant
  - $3,095,288.90 Reclamation Construction Grant
  - $125,000 Emergency Reclamation Grant
  - $36,000 Coal Outcrop Fire Grant

- $1.5 Million RIT-RGD Grants approved by Legislature:
  - Goldsil Reclamation Project (Silver Creek) $300,000
  - Washington Mine Reclamation Project $300,000
  - Bluebird Mine Reclamation Project $300,000
  - Frohner Mine Reclamation Project $300,000
  - Buckeye Mine Reclamation Project $300,000

- Completed reclamation at the Shelby Gravel Pit Reclamation Project, Toole County, at Keene #1 Coal Mine Reclamation Project, Musselshell County, and at the Klein East Sump Slope Emergency Project, Musselshell County
- Completed coal fire abatement activities at the Poker Jim Seam Coal Fire, Rosebud County and at the Robinson Seam Coal Fire, Big Horn County
- Let contract for reclamation at the Coal Creek Mine in Rosebud County as a cooperative project with the Energy and Industrial Minerals Bureau (coal mining regulatory program)
- Performed maintenance work at Parkhurst Coal Mine Reclamation and Bertha, Big Ox, and Gregory hard rock reclamation project sites
- Initiated investigations or continued work at the following abandoned mine reclamation projects:
  - Belt Coal Mine Acid Mine Drainage Control Project, Cascade County
  - North Fork Coal Company Mine Fire, Flathead County
  - Elkhorn Queen, Bluebird Mine, Frohner Mine, Big Chief-Golconda Mine, Argentine Mine, Mt. Washington Mine, all in Jefferson County
  - Bald Butte Mine, Ontario Millsite, Silver Creek Drainage, and Spring Meadow Lake Park Site, all in Lewis and Clark County; at Spring Meadow Lake Park Site, the Montana Fish, Wildlife and Parks Department is coordinating with the AMLS to develop clean-up plans that will allow for construction of an Education Center with associated facilities and parking
  - Snowshoe Mine, Lincoln County
  - Buckeye Mine, Madison County
  - Jefferies #1 Coal Mine and Goffena-Brillhart Mine Fire, both in Musselshell County
  - McLaren Tailings and Millsite, Republic Smelter, both in Park County
  - Red Bluff Coal Seam Fires, Yellowstone County

Wickes Smelter Site Reclamation:

Work began on the Wickes smelter site reclamation in northern Jefferson County south of Helena September 7. The $1.5 million project, long in planning and design, could not move ahead until completion of a property transfer between BLM and Montana Tunnels Mine. One key task of the project was demolition of the 120-year old smelter stack. A structural engineer's

assessment determined that the stack was generally unsafe to the public and presented a safety hazard for the cleanup work on the site. On Sept. 16, the stack was razed by pulling a one-and-one-half inch cable through the structure with a bulldozer. The hundred-year old stack did not come down easily.

Federal Superfund Section

The Federal Superfund Section of the Mine Waste Cleanup Bureau is responsible for administering cleanup activities, alone and in coordination with EPA, BLM and USFS, at federal Superfund sites throughout the state, two of which, Streamside Tailings and Montana Pole, result from settlements with responsible parties.

Lockwood Solvent Groundwater Plume Site

The EPA has designated the state of Montana through the DEQ as the lead agency for this site. The DEQ and EPA issued a Proposed Plan for cleanup in 2004. The preferred option to clean up solvents in the soils and ground water at Lockwood is a combination of a permeable reactive barrier, enhanced bioremediation, soil-vapor extraction, extraction and thermal treatment of shallow soil, and chemical oxidation application to deeper soil.

Montana Pole

Remediation at the former wood-treating site continues with treatment of contaminated groundwater and soil. During 2004, the eight soil storage piles (SSPs) that met the cleanup goal established in the ROD were dismantled and backfilled onsite. SSPs 5, 6, 7, 8, 9, 10, 11, and 12 contained an approximate total of 13,050 cubic yards of treated soil material. The covers, liners, piping, and associated equipment were removed from each of the eight SSPs and either cleaned and disposed in a solid waste landfill or segregated and sized appropriately for shipment to a hazardous waste incinerator. The remaining five SSPs will be dismantled placed on the landfarm treatment unit (LTU) for further treatment, as necessary.

Due to time constraints in the 2004 construction season and efforts to reduce the impacts of nuisance odors to the adjacent Boulevard neighborhood, DEQ postponed the planned offload and regrade of the LTU until spring 2005.

DEQ continues to work with MDT to coordinate activities associated with the replacement of the bridge bisecting the site, enabling access to previously inaccessible soils beneath the western bridge approach. This highway reconstruction work is currently scheduled to begin in 2007.

Other sites

At other EPA-lead NPL sites, coordination and consultation with DEQ continues.

- Remedial action at the Tenmile and Basin Watershed NPL sites;
- Investigative work at the Barker-Hughesville and Carpenter Creek-Snow Creek NPL sites;
- Development of an acceptable proposed plan and remedy for the ASARCO smelter site in East Helena;
- Record of Decision issued for the Milltown Reservoir Sediments Site. It calls for removal of the Milltown Dam and about 2.6 million cubic yards of contaminated sediments. Cleanup will integrate remediation and restoration work. Design work is under way and EPA hopes the cleanup can be completed by 2009;
- Proposed Plan issued for Butte Priority Soils Operable Unit;

- Record of Decision issued for the Clark Fork River Operable Unit. It calls for cleanup of mining-related contamination of about 120 miles of the Clark Fork River between Warm Springs Ponds and the Milltown Reservoir. The work includes stabilization of stream banks and removal of some of the worst contaminated areas. The work will cost about $120 million and require about 10 years to complete;
- The DEQ also coordinated closely with the EPA for remedial design/remedial action at the Anaconda Smelter, other Butte area sites (Rocker, Warm Springs Ponds, Mine Flooding), Idaho Pole in Bozeman, Libby Groundwater, and BN Somers.

Construction Services Section

Silver Bow Creek Streamside Tailings Operable Unit

Work on Silver Bow Creek in 2004 cleaned up and restored another 4,600 feet of streamside, extending to nearly six miles the length of completed cleanup of the 23-mile contaminated site. Blahnik Construction worked under a $9.7 million contract to remove 4.3 million cubic yards of contaminated material in the Ramsey area. The removed tailings are hauled 20 miles by rail to a repository at Opportunity Ponds. Restoration also involves replacing removed material with local fill, organic amendments, native grass seeding, willow and shrub plantings, and complete channel reconstruction. Pacific Builder and Engineer magazine published a comprehensive cover article on Silver Bow Creek cleanup in the December 20, 2004, issue. The article is accessible online at: http://www.acppubs.com/article/CA487706.html

The cleanup has been ongoing since 1999 as part of a Superfund remedial action being coordinated by DEQ's Mine Waste Cleanup Bureau in consultation with the EPA. In 2000, the Natural Resource Damage Program of the Montana Department of Justice formed a partnership with DEQ, bringing a restoration component to the project that goes beyond remediation required under Superfund.